

A Compilation of Information on the $^{31}\text{P}(\text{p},\gamma)^{32}\text{S}$ Reaction and Properties of Excited Levels in ^{32}S ^a

by

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Abstract

This report documents a survey of the literature, and provides a compilation of data contained therein, for the $^{31}\text{P}(\text{p},\gamma)^{32}\text{S}$ reaction. Attention here is paid mainly to resonance states in the compound-nuclear system ^{32}S formed by $^{31}\text{P} + \text{p}$, with emphasis on radiative capture, *i.e.*, gamma-ray decay channels ($^{32}\text{Si} + \gamma$) which populate specific levels in ^{32}S . The energy region near the proton separation energy for ^{32}S is especially important in this context for applications in nuclear astrophysics. Properties of the excited states in ^{32}S are also considered. Summaries of all the located references with significant content are provided and numerical data contained in them are compiled in EXFOR format where applicable.

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